

Integrated Healthcare and Patients' Quality of Life in Saudi Arabia: A Narrative Review of Evidence Across Primary Care, Dentistry, Nursing, and Digital Health Services

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Abstract

The importance of integrated healthcare in enhancing patient-centered outcomes and care coordination is becoming more widely acknowledged. With an emphasis on outcomes pertaining to patients' quality of life, this research synthesizes data from the Kingdom of Saudi Arabia to investigate integrated healthcare programs across primary care, dentistry, nursing, home healthcare, and digital health services. Improved continuity and coordination of care are linked to increased patient satisfaction and perceived health status, especially among people with chronic illnesses, according to data from primary healthcare settings. The most consistent reports of direct increases in health-related quality of life came from home healthcare facilities that offered integrated, multidisciplinary treatment. Access to and use of preventive oral healthcare were enhanced by the integration of dental services into primary care; nevertheless, inadequate interprofessional collaboration is still a problem. Digital health projects showed improved follow-up continuity and access to care. Overall, integrated healthcare in Saudi Arabia demonstrates potential benefits for patient-centered outcomes, underlining the need for stronger interprofessional integration and standardized quality-of-life evaluation to support ongoing healthcare transformation efforts.

INTRODUCTION

Because integrated healthcare may address service fragmentation, improve care coordination, and improve patient-centered outcomes, it has become a major priority of global health systems. Particularly for people with complex healthcare demands and chronic diseases, fragmented healthcare delivery has been repeatedly linked to poor patient experiences, inefficiencies in service usage, and decreased continuity of treatment. With the overall objective of enhancing health outcomes and patients' quality of life, integrated healthcare models seek to address these issues by coordinating services across disciplines and levels of care, such as primary care, nursing, dentistry, community services, and digital health platforms.

Quality of life, which includes social, psychological, and physical well-being in addition to traditional clinical outcomes, is becoming more widely acknowledged as a crucial measure of healthcare success. Coordinated and continuous care is linked to better patient satisfaction, perceived health status, and engagement with healthcare services, all of which are closely related

to health-related quality of life, according to data from Saudi Arabia (Almalki et al., 2023; Chan et al., 2021). These results highlight the significance of integrated care models in primary healthcare settings, where patient well-being is mostly dependent on long-term treatment and preventive interventions.

Within the scope of Vision 2030's Healthcare Transformation Program, which prioritizes value-based, patient-centered, and preventive care, healthcare integration has drawn a lot of interest in Saudi Arabia. The Saudi Model of Care encourages integration among primary healthcare clinics, hospitals, home healthcare, and digital health systems (Ministry of Health, 2023). Despite these national efforts, a number of studies indicate that Saudi Arabian healthcare delivery is still fragmented to varying degrees, especially between medical, nursing, and dental services, which may limit the impact of care on patients' overall quality of life (Al-Anezi et al., 2025).

Continuity and coordination of care for patients with chronic diseases are linked to greater patient satisfaction and perceived health outcomes, according to research done in Saudi primary healthcare facilities (Almalki et al., 2023; Chan et al., 2021). Additionally, research from Saudi home healthcare services shows that patients' health-related quality of life in the physical, psychological, and social domains is greatly impacted by multidisciplinary and coordinated treatment (Al-Surimi et al., 2019). These results emphasize how crucial integrated service delivery is to meeting vulnerable populations' complex healthcare requirements.

The integration of oral healthcare into primary care is an important yet underdeveloped component of integrated healthcare in the Saudi context. Integrated dental services increase access to and use of preventive treatment, according to studies evaluating oral health services in primary healthcare facilities (AlSadiq et al., 2023). However, studies looking at family doctors' oral health knowledge and practices have found educational gaps and little interprofessional cooperation between family medicine and dentistry (Alshathri et al., 2020). Inadequate integration of dental services may have a detrimental impact on patients' quality of life due to the documented connections between oral health, pain, nutrition, social functioning, and general well-being.

In Saudi Arabia, digital health initiatives have become important facilitators of healthcare integration. Access to care, continuity of follow-up, and patient satisfaction have all improved, according to evaluations of national telemedicine platforms and virtual healthcare services, such as the Seha application and centralized medical call centers (Alghamdi et al., 2021; Al-Wathinani et al., 2024). With the potential to improve quality of life, these system-level integration initiatives enhance chronic disease management and continuity of treatment by facilitating communication between patients and multidisciplinary healthcare teams.

There is still a dearth of thorough evaluations summarizing data on how integration across dentistry, family medicine, nursing, and healthcare services affects patients' quality of life, despite the expanding corpus of Saudi-based research targeting specific integrated healthcare components. Instead of using conventional quality-of-life metrics, the majority of current research concentrate on service usage, satisfaction, continuity of care, or workforce outcomes. This disparity emphasizes the necessity of a methodical synthesis of Saudi literature in order to gain a deeper comprehension of the extent, results, and constraints of integrated healthcare models.

Thus, the purpose of this research is to compile Saudi Arabian data on integrated healthcare models and analyze their purported effects on patients' quality of life. This evaluation aims to guide future research, policy development, and healthcare practice in line with national healthcare transformation goals by combining data from primary care, dental, nursing, home healthcare, and digital health services.

METHODS

In order to compile the available data on integrated healthcare models and their effects on patients' quality of life in the Kingdom of Saudi Arabia, this study used a narrative literature review design. In order to enable a thorough analysis of various study designs, healthcare locations, and outcome measures pertaining to the integration of services across dentistry, family medicine, nursing, and larger healthcare systems, the narrative approach was chosen.

Using PubMed/PubMed Central, Scopus, Web of Science, and Google Scholar, a thorough literature search was carried out. The websites of the Saudi Ministry of Health and Saudi Health Holding Company were used to find pertinent national policy documents and official reports in addition to peer-reviewed journal articles. In order to maximize the retrieval of pertinent studies, Boolean operators were used in conjunction with Medical Subject Headings and free-text keywords pertaining to integrated healthcare, primary care, dentistry, oral health, family medicine, nursing, telemedicine, digital health, quality of life, patient-centered care, and Saudi Arabia.

Studies that addressed the integration or coordination of healthcare services across at least one pertinent domain, such as primary care, dentistry, nursing, home healthcare, or digital health, and were carried out in Saudi Arabia and published in English-language peer-reviewed journals or official national reports were deemed eligible for inclusion. Results pertaining to quality of life or closely associated patient-centered indicators, such as patient satisfaction, continuity of treatment, access to services, or patient-reported outcomes, had to be reported in studies. Excluded were articles published outside of Saudi Arabia, editorials, opinion pieces, conference abstracts, and research that only addressed clinical efficacy without mentioning service integration or patient-centered outcomes.

Titles and abstracts were examined to find potentially relevant papers after the database search. After that, full-text versions of qualified papers were examined to verify inclusion in accordance with the predetermined standards. In cases where eligibility was unclear, studies were reassessed by closely examining their goals, procedures, and published results to make sure they aligned with the review's objectives.

A structured narrative method was used to gather data from the included studies, concentrating on study features such as authorship, year of publication, study setting, demographic, design, kind of healthcare integration evaluated, outcome measures related to quality of life, and significant findings. Quantitative synthesis and meta-analysis were inappropriate due to variability in study designs, demographics, and outcome measures. Rather, a qualitative narrative synthesis was conducted, and the results were arranged thematically based on the main integration domains, such as home healthcare services, primary healthcare coordination, dentistry and oral health integration, nursing roles in care coordination, and digital health initiatives.

As this review was narrative in nature, formal assessment of methodological quality or risk of bias was not conducted. Nevertheless, priority was given to peer-reviewed studies, national-level research, and articles with clear methodological descriptions to enhance the reliability and relevance of the synthesized evidence.

RESULTS

The examined studies show that integrated healthcare initiatives are becoming more prevalent throughout the Kingdom of Saudi Arabia's healthcare services, with data showing differing degrees of implementation and efficacy in primary healthcare, dentistry, nursing, home healthcare, and digital health settings. Depending on the patient demographic, level of service coordination, and healthcare setting, the reported integration and patient-centered care outcomes varied significantly. Continuity and coordination of care, two essential elements of integrated healthcare, have been repeatedly linked to better patient satisfaction, perceived health status, and engagement with healthcare services, especially among patients with chronic illnesses treated in primary healthcare facilities, according to national and regional studies (Almalki et al., 2023; Chan et al., 2021).

Continuity of treatment is a crucial sign of functional integration, according to data from primary healthcare settings. Higher continuity of care scores were linked to better clinical follow-up and better patient-reported outcomes, such as satisfaction and perceived quality of care, according to studies done among patients with diabetes and hypertension in Saudi primary healthcare facilities (Almalki et al., 2023; Chan et al., 2021). The documented improvements in continuity and patient experience indicate a positive association between integrated primary care delivery and quality-of-life-related outcomes, despite the fact that these studies did not consistently use standardized quality-of-life questionnaires.

More concrete evidence of health-related quality of life was found in studies that concentrated on home healthcare services. Al-Surimi et al. (2019) found that patients getting coordinated home healthcare in Saudi Arabia had significantly superior quality-of-life scores in both the physical and psychological domains. This was especially true for patients receiving multidisciplinary treatment and routine follow-up. These results show that patients with chronic illness and functional dependency have better well-being when nursing, medical, and supportive services are integrated into home healthcare settings.

Access to oral healthcare and the use of preventive dental services have improved, according to studies looking at the integration of dental services inside primary healthcare facilities. Increased attendance at dental clinics integrated into primary healthcare facilities was observed in a Riyadh study, indicating that structural integration improves service accessibility (AlSadiq et al., 2023). However, complementary studies assessing family physicians' knowledge and practices regarding oral health identified limited interprofessional collaboration and insufficient oral health training, indicating that functional integration between dentistry and family medicine remains suboptimal (Alshathri et al., 2020). These results imply that although service accessibility has increased, the wider influence on patients' general quality of life may be limited by insufficient integration.

In Saudi Arabia, integrated healthcare delivery has been repeatedly found to be facilitated by digital health services. Assessments of centralized medical contact centers and national telemedicine platforms showed better follow-up continuity, shorter wait times, and increased access to care (Alghamdi et al., 2021; Al-Wathinani et al., 2024). High levels of patient satisfaction were observed for all of these digital services, suggesting that system-level integration facilitates the provision of more effective and patient-centered treatment. The reported gains in accessibility and continuity point to possible advantages for patient well-being, even if direct quality-of-life indicators were not routinely evaluated.

In all of the evaluated research, the function of nursing emerged as a crucial element of integrated healthcare. Research showed that in primary healthcare and home healthcare settings, nurses are essential to care coordination, patient education, and follow-up. Research on nursing practice settings revealed that structured care pathways and organizational support improve nurses' ability to contribute successfully to integrated service delivery, hence indirectly promoting patient-centered outcomes (Al-Surimi et al., 2019; Almalki et al., 2023).

Overall, the analyzed data shows that Saudi Arabia's integrated healthcare models are linked to increases in patient satisfaction, continuity, and access to care. However, there is still little direct evaluation of health-related quality of life; instead, the majority of research uses indirect measures. The results demonstrate the increasing use of integrated healthcare as well as the need for a more thorough assessment of how it affects patients' quality of life in various healthcare settings.

DISCUSSION

The review's conclusions show that integrated healthcare models are being used more frequently in the Kingdom of Saudi Arabia in a variety of healthcare contexts, such as primary care, home healthcare, dentistry, nursing services, and digital health platforms. According to the analyzed data, service integration is linked to gains in patient satisfaction, continuity, and access to care—all of which are commonly acknowledged as significant factors influencing patients' quality of life. However, the degree of interprofessional collaboration, coordination, and healthcare context all seem to have a significant impact on the degree and efficacy of integration.

Continuity of care is a key component of integrated healthcare in Saudi Arabia, as primary healthcare studies have repeatedly shown. Better patient-reported outcomes were linked to improved continuity and coordination, especially for those with long-term conditions including diabetes and hypertension. These results are in line with more extensive research showing that coordinated follow-up and long-term patient-provider relationships improve patients' perceptions of their health and level of engagement with their care. However, rather than using standardized quality-of-life instruments, the majority of Saudi primary care studies relied on indirect measures of quality of life, such as patient satisfaction and perceived quality of care. This makes it more difficult to make firm judgments on how much integration affects overall quality of life.

More solid proof of the connection between integrated care and health-related quality of life was found in home healthcare studies. Patients with chronic illness and functional limitations who received coordinated, interdisciplinary home healthcare services reported far better physical and psychological well-being. These results highlight the significance of integration in environments where patients need ongoing, long-term care and where fragmented care may worsen their independence and functional status. An imbalance in outcome evaluation throughout the Saudi healthcare system is highlighted by the direct assessment of quality-of-life outcomes in home healthcare as opposed to the restricted measurement seen in other healthcare settings.

In Saudi Arabia, the incorporation of dental services within primary healthcare is still a developing aspect of integrated healthcare. Functional integration seems to be restricted, despite the fact that structural integration—such as integrating dental clinics within primary healthcare facilities—has been demonstrated to increase access to and use of preventive dental services. Dentistry is still somewhat cut off from medical and nursing services, according to studies showing gaps in oral health awareness among family doctors and poor interprofessional cooperation. Given the well-established relationship between oral health, pain, nutrition, and social functioning, improper integration of dental services may diminish the potential influence of healthcare delivery on patients' entire quality of life.

In Saudi Arabia, integrated healthcare has been greatly aided by digital health initiatives, especially when it comes to increasing access, effectiveness, and continuity of care. High levels of patient satisfaction and better follow-up have been shown by national telemedicine platforms and virtual healthcare services, indicating that digital integration can get across logistical and geographic obstacles. But like other integration-related fields, most studies on digital health focused on service effectiveness and satisfaction rather than measuring quality-of-life outcomes directly. Systematic assessment of the long-term effects of digital health on patients' physical, psychological, and social well-being is still required as the field grows.

A key operational element of integrated healthcare in a variety of settings was found to be nursing. Particularly in primary and home healthcare services, nurses are essential to care coordination, patient education, and continuity. The results indicate that supportive organizational structures and well-defined care pathways improve nurses' ability to provide integrated, patient-centered care, even though nursing-focused research frequently looked at workforce outcomes rather than patient quality of life directly. This indirect contribution emphasizes how crucial workforce development and nurse leadership are to the success of integrated healthcare models.

Overall, the review's conclusions indicate that although integrated healthcare in Saudi Arabia is linked to better patient-centered outcomes, continuity, and access, there is still little concrete proof that integration improves quality of life. Comparison and synthesis are difficult due to the differences in integration models, outcome measures, and study methods. One major gap in the current literature is the lack of standardized quality-of-life measurements in many studies.

These results emphasize the necessity of using standardized health-related quality-of-life metrics in future Saudi Arabian research when assessing integrated healthcare models. Understanding the actual effects of integration on patient well-being may be improved by enhancing interprofessional collaboration, especially between dentistry, family medicine, and nursing, and integrating quality-of-life measurement into digital and primary care efforts. In order to advance integrated healthcare delivery in line with the objectives of the national healthcare transformation, it will be crucial to close these gaps.

CONCLUSION

This review shows that the Kingdom of Saudi Arabia is increasingly implementing integrated healthcare models in primary healthcare, home healthcare, dentistry, nursing services, and digital health systems. The results show that these models have a positive impact on patient-centered outcomes, continuity, and access to care. These components reflect current national initiatives to move toward integrated and value-based healthcare delivery and are important determinants of patients' quality of life.

According to the reviewed research, better patient satisfaction and perceived health status are linked to continuity and coordination of care in primary healthcare settings, especially for those

with chronic illnesses. Multidisciplinary and coordinated care models have been demonstrated to promote physical and psychological well-being in home healthcare settings, providing more concrete proof of enhanced health-related quality of life. On the other hand, data from digital health services and dentistry integration mainly showed increases in patient satisfaction and service accessibility, with little direct evaluation of quality-of-life results.

The results show a significant gap in the systematic assessment of quality of life as a key outcome, despite the increasing adoption of integrated healthcare programs. The majority of Saudi research focused on indirect measures such as service consumption, continuity, and satisfaction, which made it difficult to completely evaluate how integration affected patients' general well-being. Furthermore, the potential advantages of integrated treatment may be limited by inadequate interprofessional collaboration, especially across dentistry, family medicine, and nursing.

In conclusion, integrated healthcare in Saudi Arabia shows potential in enhancing patient-centered outcomes and promoting quality of care; yet, its direct impact on patients' quality of life remains underexplored. To properly capture the results of integrated healthcare models, future research should include thorough assessment frameworks and standardized quality-of-life indicators. To fully reap the benefits of integrated healthcare in line with national health system goals, interprofessional collaboration must be strengthened and quality-of-life assessment must be incorporated into healthcare reform programs.

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